

...DECEMBER 2011 REGIONAL CLIMATE SUMMARY...

SUMMARY FOR THE SAN FRANCISCO BAY AREA AND MONTEREY BAY AREA...

...ONE OF THE DRIEST DECEMBERS ON RECORD...

VERY LITTLE RAIN FELL ACROSS THE REGION DURING DECEMBER 2011...MAKING IT ONE OF THE DRIEST DECEMBERS ON RECORD. IN ADDITION TO A SCARCITY OF PRECIPITATION...DECEMBER 2011 WAS ALSO NOTABLE FOR ITS SUNNY AND MILD DAYS AND CLEAR AND COLD NIGHTS.

THE MONTH GOT OFF TO A BLUSTERY START. A POWERFUL WIND STORM THAT DEVELOPED OVER THE WESTERN UNITED STATES DURING THE LAST DAY OF NOVEMBER...PERSISTED INTO THE FIRST DAY OF DECEMBER. WIND SPEEDS PEAKED DURING THE PRE-DAWN HOURS OF THURSDAY DECEMBER 1ST WHEN GUSTS IN EXCESS OF 50 MPH WERE REPORTED. HIGH WINDS DOWNED TREES AND POWER LINES AND KNOCKED OUT POWER TO NEARLY 30,000 PEOPLE ACROSS THE SAN FRANCISCO BAY AREA AND ANOTHER 24,000 PEOPLE IN SANTA CRUZ AND MONTEREY COUNTIES. ALSO...A BART TRAIN HIT A TREE THAT HAD FALLEN ACROSS THE TRAIN TRACKS NEAR THE HAYWARD STATION THAT MORNING. STRONGER WINDS AND MORE EXTENSIVE DAMAGE OCCURRED ACROSS SOUTHERN CALIFORNIA ON THE FIRST DAY OF THE MONTH.

STRONG OFFSHORE WINDS ON DECEMBER 1 BROUGHT A VERY DRY AIRMASS INTO THE AREA AND SET THE STAGE FOR A NICE WARMUP ON FRIDAY THE 2ND. HIGH TEMPERATURES ON THE 2ND WERE MOSTLY IN THE 70S ACROSS THE SAN FRANCISCO BAY AREA AND SEVERAL DAILY RECORD HIGH TEMPERATURE RECORDS WERE SET OR TIED. THE 2ND WAS THE WARMEST DAY OF THE MONTH IN THE BAY AREA.

PERIODIC OFFSHORE FLOW DURING DECEMBER KEPT THE AIRMASS OVER OUR REGION UNUSUALLY DRY. THE DRIEST AIRMASS OF THE MONTH SWEEPED ACROSS THE AREA ON THURSDAY DECEMBER 22ND. DEWPOINTS THAT DAY DROPPED AS LOW AS MINUS ONE DEGREE F ACROSS PORTIONS OF THE SAN FRANCISCO BAY AREA AND RELATIVE HUMIDITY VALUES WERE IN THE SINGLE DIGITS. THE UNSEASONABLY DRY AIR OVER OUR REGION DURING DECEMBER RESULTED IN NUMEROUS SUNNY AND MILD DAYS ALONG WITH CLEAR AND COLD NIGHTS. AVERAGE HIGH TEMPERATURES FOR THE MONTH WERE ABOVE NORMAL AT NEARLY ALL CLIMATE STATIONS. AREAS NEAR THE OCEAN AND BAYS SAW ONLY SLIGHTLY WARMER-THAN-AVERAGE DAYS. VALLEY LOCATIONS THAT BENEFITED FROM DOWNSLOPE WARMING DURING OFFSHORE WIND EVENTS (E.G., NORTH BAY VALLEYS AND BEN LOMOND IN THE SANTA CRUZ MOUNTAINS) EXPERIENCED MORE SIGNIFICANT DAYTIME WARMING AND HAD AVERAGE HIGH TEMPERATURES FOR THE MONTH THAT WERE FROM 4 TO 8 DEGREES F ABOVE NORMAL. BECAUSE THE AIR WAS OFTEN VERY DRY AND SKIES WERE OFTEN CLEAR...HEAT RADIATED AWAY FROM THE SURFACE VERY EFFICIENTLY DURING MANY OF THE LONG DECEMBER NIGHTS. FREEZING TEMPERATURES WERE COMMON IN THE INLAND VALLEYS ON MANY NIGHTS. OVERNIGHT LOW TEMPERATURES AT OR BELOW FREEZING OCCURRED ON 20 OF 31 DECEMBER NIGHTS AT BOTH THE NAPA AND SANTA ROSA AIRPORTS...ON 15 NIGHTS AT THE LIVERMORE AIRPORT...AND 19 NIGHTS IN KING CITY. AVERAGE LOW TEMPERATURES WERE BELOW NORMAL AT MOST CLIMATE STATIONS...GENERALLY ANYWHERE FROM 2 TO 5 DEGREES BELOW NORMAL. THE AVERAGE OVERNIGHT LOW TEMPERATURE WAS 32 DEGREES OR LESS AT

THE TWO NORTH BAY AIRPORTS AS WELL AS KING CITY AND BEN LOMOND. SAN FRANCISCO WAS THE ONLY CLIMATE STATION NEAR SEA LEVEL THAT DID NOT HAVE AN AVERAGE MONTHLY MINIMUM TEMPERATURE BELOW NORMAL. BECAUSE THE AIRMASS ALOFT WAS RELATIVELY WARM FOR MUCH OF THE MONTH...CLIMATE STATIONS AT BOTH MOUNT DIABLO JUNCTION AND AT LICK OBSERVATORY ON MOUNT HAMILTON EXPERIENCE WARMER-THAN-NORMAL MINIMUM TEMPERATURES.

A PERSISTENT RIDGE OF HIGH PRESSURE ALOFT LOCATED NEAR THE WEST COAST KEPT PRECIPITATION AWAY FROM NORTHERN AND CENTRAL CALIFORNIA FOR NEARLY THE ENTIRE MONTH OF DECEMBER. THE JET STREAM AND PACIFIC STORM SYSTEMS MOSTLY REMAINED WELL NORTH OF CALIFORNIA. THE RIDGE WEAKENED ONLY ON A FEW OCCASIONS...ALLOWING A FEW WEAK WEATHER SYSTEMS INTO OUR AREA. THESE WEATHER SYSTEMS PRODUCED ONLY LIGHT AMOUNTS OF RAIN. RAIN FELL ON ONLY FOUR DECEMBER DAYS...THE 12TH AND 13TH...THE 15TH AND THE 30TH. THE TOTAL RAINFALL FOR ALL OF THESE LIGHT RAIN EVENTS COMBINED WAS LESS THAN A QUARTER OF AN INCH AT NEARLY ALL CLIMATE STATIONS. DECEMBER 2011 RAINFALL TOTALED LESS THAN 10% OF NORMAL AT ALL CLIMATE STATIONS AND AS LITTLE AS 1 TO 3 PERCENT OF NORMAL AT SEVERAL LOCATIONS. DECEMBER 2011 WAS THE THIRD DRIEST DECEMBER ON RECORD IN SAN FRANCISCO...WHERE PRECIPITATION RECORDS GO BACK 162 YEARS TO 1849. AT MOST OTHER CLIMATE STATIONS...DECEMBER 2011 WAS THE SECOND DRIEST ON RECORD. ONLY DECEMBER OF 1989 WAS DRIER...A MONTH THAT WAS WITHOUT MEASURABLE RAINFALL AT A MAJORITY OF CLIMATE STATIONS. THREE CLIMATE STATIONS EXPERIENCED THEIR DRIEST DECEMBER ON RECORD IN 2011. DECEMBER RAINFALL RECORDS ARE LISTED BELOW:

LOCATION	DECEMBER 2011 RAINFALL / RANK	PREVIOUS RECORD DRY DECEMBER / AMOUNT
SALINAS AIRPORT	0.01 DRIEST	1989 0.05
LIVERMORE	0.04 DRIEST	1989 0.10
SALINAS	0.05 DRIEST	1989 0.07

LOCATION	DECEMBER 2011 RAINFALL / RANK	RECORD DRY DECEMBER / AMOUNT
LOS GATOS	0.02 2ND DRIEST	1989 0.00
WATSONVILLE	0.04 2ND DRIEST	1989 0.03
HOLLISTER	0.04 3RD DRIEST	1989 0.00
GILROY	0.05 2ND DRIEST	1989 0.01
SAN JOSE	0.08 2ND DRIEST	1989 0.04
REDWOOD CITY	0.08 2ND DRIEST	1989 0.00
WOODSIDE	0.10 2ND DRIEST	1989 0.00
PETALUMA	0.10 2ND DRIEST	1989 0.00
PALO ALTO	0.11 2ND DRIEST	1989 0.01
SFO AIRPORT	0.13 2ND DRIEST	1989 0.01
SANTA CRUZ	0.13 2ND DRIEST	1989 0.05
SAN FRANCISCO	0.14 3RD DRIEST	1989 1876 0.00
PACIFICA	0.14 2ND DRIEST	1989 0.02

MOUNT HAMILTON	0.17	3RD DRIEST	1959	0.00
NAPA	0.18	2ND DRIEST	1989	0.00
SANTA ROSA AP	0.20	2ND DRIEST	1989	0.00
SAINT HELENA	0.26	2ND DRIEST	1989	0.00
CALISTOGA	0.38	2ND DRIEST	1989	0.00
HALF MOON BAY	0.39	2ND DRIEST	1989	0.03

SEASON-TO-DATE RAINFALL TOTALS HAD ALREADY BEEN RUNNING BELOW NORMAL AT THE BEGINNING OF DECEMBER ACROSS MOST OF THE REGION. DECEMBER'S MEAGER RAINFALL GREATLY EXACERBATED THE SEASONAL RAINFALL DEFICITS. BY DECEMBER 31ST...SEASON-TO-DATE RAINFALL WAS ONLY 25-45% OF NORMAL ACROSS THE SAN FRANCISCO BAY AREA. IN SAN FRANCISCO...THE JULY THROUGH DECEMBER RAIN TOTAL OF 3.37 INCHES WAS ONLY 37 PERCENT OF THE 30-YEAR AVERAGE OF 9.11 INCHES. THIS WAS THE 16TH DRIEST JULY-DECEMBER PERIOD IN SAN FRANCISCO SINCE 1849. SAN JOSE'S SEASON-TO-DATE RAIN TOTAL OF 1.55 INCHES WAS ONLY 29 PERCENT OF NORMAL AND REPRESENTED THE 10TH DRIEST JULY-DECEMBER SINCE 1874. FOR MOST CLIMATE STATIONS...THE JULY- DECEMBER RAIN TOTALS FOR THE CURRENT SEASON WERE THE LOWEST SINCE 1990.

...DECEMBER REGIONAL TEMPERATURE SUMMARY...

LOCATION	AVG HIGH	NORMAL HIGH	DEPARTURE FROM NORMAL		AVG LOW	NORMAL LOW	DEPARTURE FROM NORMAL	
NORTH BAY...								
CALISTOGA	63.5	58.5	5.0		33.0	36.4	-3.4	
KENTFIELD								
NAPA	M	57.1	M		35.5	39.6	-4.1	
NAPA AIRPORT	59.8	55.6	4.2		31.0	36.0	-5.0	
PETALUMA AIRPORT	61.3	57.0	4.3		34.2	38.5	-4.3	
SAINT HELENA	61.8	57.4	4.2		37.7	38.1	-0.4	
SANTA ROSA								
SANTA ROSA AP	61.2	56.3	4.9		31.8	36.5	-4.7	
SONOMA								

SAN FRANCISCO PENINSULA...

HALF MOON BAY	59.4	59.0	0.4		36.8	41.9	-5.1
PACIFICA	56.6	57.2	-0.6		45.7	48.3	-2.6
REDWOOD CITY	60.4	58.1	0.1		41.8	44.6	-2.8
SAN FRANCISCO							
AIRPORT	56.7	56.6	0.1		41.8	44.6	-2.8
SAN FRANCISCO							
DOWNTOWN	58.2	57.1	1.1		46.4	46.1	0.3
WOODSIDE	63.5	60.3	3.2		32.4	36.4	-4.0

EAST BAY...

BERKELEY

CONCORD AIRPORT	59.4	55.6	3.8	34.3	39.8	-5.5
FREMONT	59.0	57.8	1.2	37.8	42.5	-4.7
HAYWARD AIRPORT	58.6	57.5	1.1	39.2	42.6	-3.4
LIVERMORE	59.3	56.4	2.9	35.6	39.1	-3.5
LIVERMORE AP	60.3	56.2	4.1	34.1	37.7	-3.6
MARTINEZ	58.0	55.6	2.4	30.9	35.5	-4.6
MOUNT DIABLO						
JUNCTION	56.8	55.2	1.6	42.0	39.8	2.2
NEWARK	59.2	58.0	1.2	39.7	42.3	-2.6
OAKLAND	61.2	58.3	2.9	42.4	44.7	-2.3
OAKLAND AIRPORT	58.2	56.4	1.8	39.7	41.5	-1.8
RICHMOND	59.4	57.7	1.7	42.5	43.6	-1.1

SOUTH BAY AND SANTA CRUZ COUNTY...

BEN LOMOND	68.3	60.5	7.8	32.2	36.5	-4.3
GILROY	63.4	60.5	2.9	34.3	37.4	-3.1
LOS GATOS						
MOFFETT FIELD	62.7	58.9	3.8	41.0	42.9	-1.9
MOUNT HAMILTON	49.7	48.1	1.6	38.9	37.8	1.1
SAN JOSE	60.4	58.0	2.4	38.3	41.9	-3.6
SANTA CRUZ	61.3	61.9	-0.6	36.2	41.2	-5.0
WATSONVILLE	63.5	60.8	2.7	35.4	39.4	-4.0
WATSONVILLE AP	62.3	60.0	2.3	36.3	39.7	-3.4

MONTEREY AND SAN BENITO COUNTIES...

CARMEL VALLEY	63.6	61.6	2.0	34.6	38.6	-4.0
HOLLISTER	60.6	59.9	0.7	33.0	37.7	-4.7
KING CITY	63.7	62.6	1.1	31.5	36.9	-5.4
MONTEREY						
MONTEREY AIRPORT	60.6	60.5	0.1	38.5	42.3	-3.8
SALINAS	65.0	62.3	2.7	34.7	39.6	-4.9
SALINAS AIRPORT	63.3	61.1	2.2	36.6	40.8	-4.2

...DECEMBER REGIONAL PRECIPITATION SUMMARY...

LOCATION	DEC TOTAL	NORMAL DEC PRECIP	PERCENT OF NORMAL
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NORTH BAY...

CALISTOGA	0.38	7.88	5
CLOVERDALE			
KENTFIELD			
MUIR WOODS			
NAPA	0.18	5.23	3
NAPA AIRPORT	0.16	3.79	4
OCCIDENTAL			
PETALUMA AIRPORT	0.10	4.94	2
SAINT HELENA	0.26	7.12	4
SANTA ROSA			

SONOMA COUNTY AP	0.20	7.03	3
SONOMA			

SAN FRANCISCO PENINSULA...

HALF MOON BAY	0.39	5.28	7
PACIFICA	0.14	6.18	2
PALO ALTO	0.11	2.95	4
REDWOOD CITY	0.08	3.84	2
SAN FRANCISCO			
AIRPORT	0.13	4.03	3
SAN FRANCISCO			
DOWNTOWN	0.14	4.56	3
WOODSIDE	0.10	5.47	2

EAST BAY...

BERKELEY			
CONCORD AIRPORT	0.07	3.14	2
FREMONT	0.08	2.82	3
HAYWARD AIRPORT	0.13	3.12	4
LIVERMORE	0.04	2.58	2
LIVERMORE AIRPORT	0.02	2.68	1
MARTINEZ	0.06	3.71	2
MOUNT DIABLO			
JUNCTION	0.27	4.39	6
NEWARK	0.03	2.56	1
OAKLAND	0.11	4.48	2
OAKLAND AIRPORT	0.11	3.66	3
RICHMOND	0.08	4.61	2

SOUTH BAY AND SANTA CRUZ COUNTY...

BEN LOMOND	0.17	9.88	2
GILROY	0.05	3.70	1
LOS GATOS	0.02	4.01	0
MOFFETT FIELD	0.16	2.56	6
MOUNT HAMILTON	0.17	4.15	4
SAN JOSE	0.08	2.61	3
SANTA CRUZ	0.13	5.68	2
WATSONVILLE	0.04	4.25	1
WATSONVILLE AP	0.05	4.20	1

MONTEREY AND SAN BENITO COUNTIES...

CARMEL VALLEY	0.15	3.01	5
HOLLISTER	0.04	2.13	2
KING CITY	0.15	1.98	8
MONTEREY			
MONTEREY AIRPORT	0.20	2.34	9
SALINAS	0.05	2.44	2
SALINAS AIRPORT	0.01	1.93	1

...DAILY TEMPERATURE RECORDS FOR DECEMBER 2011...

		RECORD MAXIMUM TEMP	PREVIOUS RECORD
12/02	SANTA ROSA	77	75 IN 1977
12/02	KENTFIELD	75	70 IN 1956
12/02	NAPA	75	75 IN 1959
12/02	DOWNTOWN SAN FRANCISCO	73	71 IN 1958
12/02	OAKLAND MUSEUM	74	67 IN 2000
12/02	OAKLAND AIRPORT	72	72 IN 1958
12/02	MOFFETT FIELD	75	75 IN 1958
12/02	RICHMOND	75	73 IN 1959

		RECORD MINIMUM TEMP	PREVIOUS RECORD
12/08	SALINAS	29	29 IN 2009
12/25	OAKLAND AIRPORT	30	33 IN 2004

...MONTHLY RANKS FOR DOWNTOWN SAN FRANCISCO...

AVERAGE HIGH TEMPERATURE.....58.3.....33RD WARMEST OUT OF 136 YEARS
 AVERAGE LOW TEMPERATURE.....46.3.....51ST COOLEST OUT OF 136 YEARS
 PRECIPITATION..... 0.14 IN.....3RD DRIEST OUT OF 162 YEARS

...MONTHLY EXTREMES FOR SELECT LOCATIONS...

LOCATION	WARMEST DAY(S)	COOLEST DAY(S)	WETTEST DAY(S)
SANTA ROSA AIRPORT	12/02 75 DEG	12/24 25 DEG	12/15 0.18 INCH
SAN FRANCISCO	12/02 73 DEG	12/24 41 DEG	12/15 0.08 INCH

SAN JOSE	12/02	12/25	12/15
	71 DEG	29 DEG	0.04
SALINAS AIRPORT	12/09	12/22	12/15
	71 DEG	30 DEG	0.01 INCH

NOTE: THIS CLIMATOLOGICAL DATA IS PRELIMINARY. FOR OFFICIAL
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